# PENTAX®

## SPORT OPTICS

*Brighten your adventure.™*

PentaBright™ TECHNOLOGY

## PENTAX PentaBright Technology: Your Best Solution for Top-Quality Viewing

The complex science of optics requires attention to the type and quality of glass, design, construction, eye relief, tube alignment, sealing against moisture, and user comfort. PENTAX has been an innovator in the field of optics for over 90 years, so no one knows optics better than PENTAX. We pioneered multi-layer lens coatings which greatly increase light transmission efficiency that delivers bright, high contrast images without flare. This establishes the core of our PentaBright technology.

## The Backbone of PENTAX's Technological Excellence

### Super-Multi-Layer Coating

All optical elements within every PENTAX product are treated with our time-proven multi-layer coating which not only improves light transmission to deliver bright, high contrast images without flare, but also reduces eye fatigue even during extended observation.

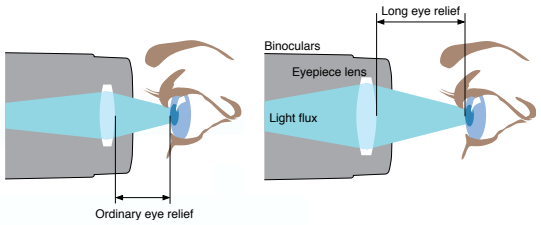
### Durable Construction

Every PENTAX Sport Optics instrument is built to the highest of standards using some of the toughest materials available. PENTAX binoculars and spotting scopes are encased in highly durable rubber-armored housings, which are designed to protect the optical mechanisms inside from shock and damage, while making them easier to hold. PENTAX waterproof products are fully sealed and feature airtight construction. They are purged with laboratory grade nitrogen to provide a fog proof view in the harshest weather conditions, and extreme temperatures.*

**Not designed for underwater use.*

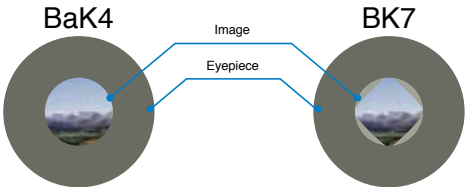
### Long Eye Relief

The long eye relief offered in all PENTAX Sport Optics allows the viewer to see the entire field of view clearly and effortlessly. This is especially beneficial to eyeglass wearers, and allows viewing for extended periods of time without added eye strain.



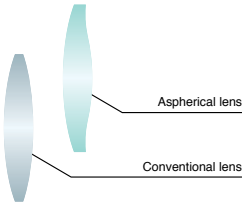
## High-Refraction BaK4 Glass Prism

Due to its outstanding refraction index, the BaK4 glass prism is highly acclaimed for its perfectly round exit pupil and clear, unvignetted image.




## Aspherical Optical Elements

The PENTAX aspherical optical elements greatly improve image brightness and sharpness, while minimizing disturbing distortions.

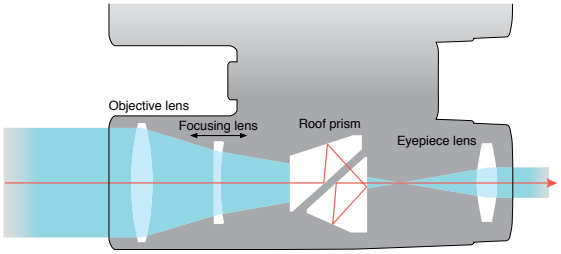



## High-Resolution Phase Coating

The roof prisms of all DCF series models are specially treated with high-resolution phase coating. Previously incorporated only in the most expensive models, this special process cancels the phase difference created on the wave front of light passing through a roof prism, thus producing sharp, high-contrast images with much improved resolution.

## Inner-focus Optical Design

Incorporated in all DCF series models, plus the UCF and PCF WP II models, this sophisticated optical design is ideal for waterproof models that require a fully airtight body construction. It also contributes to a considerable reduction in size and weight and improves overall balance by minimizing weight shift during focusing.




## Functional, Maneuverable Body Design

The body and optical mechanism of PENTAX binoculars and spotting scopes are computer-designed to ensure the easiest handling possible and minimize overall size and weight, without sacrificing optical performance.

## Straight-Line Optics for the Highest Quality and Performance

The PENTAX DCF series meets a diverse set of needs by offering six different models: the superior quality of the DCF ED, the time proven DCF SP, durable DCF WPII, heavy duty DCF HRc, value packed DCF HS and the compact DCF MC II.

All DCF series models feature high-performance straight-line optics with high-resolution phase-coated roof prisms and multi-coated optical elements. Several models also come equipped with nitrogen-filled waterproof construction (JIS Class 6), all with full-body protective rubber-armored housing and a sophisticated inner-focus optical design.

The PENTAX DCF series is the best choice for uncompromising observers who demand optimal image quality under all viewing conditions.

Southeast Alaska
Boating the inland waterway between Baranoff, Admiralty and Kuiu islands will yield sightings of hundreds of bald eagles and dozens of humpback whales, daily. Take time to venture ashore and walk in the tracks of the giant coastal grizzlies.

10x43 DCF ED

- Available in 8x32, 8x43, 10x43 and 10x50 magnifications.
- ED glass optical elements give truer colors and a sharper image.
- Full reflection coating reflects the maximum amount of light through the prisms.
- Hybrid aspherical lens elements provide edge-to-edge sharpness.
- Waterproof and nitrogen-filled (JIS Class 6) to handle the most extreme weather conditions.
- Phase coated roof prisms provide high resolution, high contrast, sharp images.
- Short minimum focus distance for close-in subjects.
- Fully-multi-coated optics provide the maximum light transmission with little glare.
- Hard coating on exposed lenses enhance the durability of the optical elements.
- Inner-focus optical design gives a well balanced, durable construction.
- Magnesium alloy body provides maximum durability in a lightweight body.
- Full rubber housing protects the binoculars from shock and makes them easier to hold.
- Locking diopter ring with click stops holds your adjustment.
- Protected by a Worry-Free Warranty.

# DCF SP SERIES

## 8x43 DCF SP

- Available in 8x32, 8x43, 10x43, 10x50 and 12.5x50.
- Hybrid aspherical lens elements for edge to edge sharpness in any lighting condition.
- Water repellent coating on exposed lens elements.
- Fully waterproof and fogproof, nitrogen-filled, submersible to 1 meter, JIS Class 6.
- Helicoid 4-stop eyepiece ring for comfortable eye relief.
- Phase-coated roof prisms for a sharper view.
- Lightweight, extremely strong magnesium alloy frame.
- Fully multi-coated lenses for increased light transmission.
- Inner-focus optical design.
- Protected by a Worry-Free Warranty.

# DCF WP II SERIES

## 10x42 DCF WP II

- Available in 8x42 and 10x42.
- Extremely durable aluminum alloy body.
- Fully waterproof and fogproof, nitrogen-filled, submersible to 1 meter, JIS Class 6.
- Inner-focus optical design.
- Helicoid eyepiece ring for comfortable eye relief.
- Rubber-armored exterior.
- Phase-coated and super reflective coated roof prisms for brighter, sharper view.
- Fully multi-coated lenses for increased light transmission.
- Click-stop diopter adjustment.
- Protected by a Worry-Free Warranty.

Rwanda
Travel on safari from Kenya's Riff Valley into Uganda and on to Rwanda for one of natures' most exhilarating encounters. Time with the gorillas is limited to one hour and a distance no closer than seven meters. Bring your DCF's.

# DCF HRc SERIES

## 8x42 DCF HRc

- Available in 8x42 and 10x42 magnifications.
- Waterproof and nitrogen-filled (JIS Class 6) to handle the most extreme weather conditions.
- Phase coated roof prisms provide high resolution, high contrast, sharp images.
- Silver-deposited roof prisms reflect more light through the prism glass for a brighter image.
- Fully-multi-coated optics provide the maximum light transmission with little glare.
- Inner-focus optical design gives a well balanced, more durable construction.
- Protected by a Worry-Free Warranty.

# DCF HS SERIES

## 8x36 DCF HS

- Available in 8x36 and 10x36.
- Helicoid eyepiece ring for comfortable eye relief.
- Phase-coated and super reflective coated roof prisms increase contrast.
- Rubber-armored to protect the optics and mechanical systems.
- Fiber reinforced polycarbonate design for lightweight durability.
- Protected by a Worry-Free Warranty.

# DCF SW SERIES

## 10x25 DCF SW

- Available in 8x25 and 10x25 magnification.
- High resolution phase-coated and super-reflective coated roof prisms.
- Waterproof and nitrogen-filled (JIS Class 6).
- Ultra compact, dual hinge design.
- Helicoid eyepiece ring with four click stops.
- Fully multi-coated lenses.
- Long eye-relief for viewing with or without glasses.
- Click-stop adjustment locks in the right eyepiece diopter.
- Rubber covered exterior.

# DCF LV SERIES

## 9x28 DCF LV

- Available in 9x28 magnification.
- Extremely durable, lightweight, compact body.
- High resolution phase-coated and super-reflective coated roof prisms.
- Nitrogen-filled waterproof (JIS Class 6) construction.
- Inner-focus optical design.
- Helicoid eyepiece rings.
- Fully multi-coated lenses.
- Rubber covered exterior.

# PCF BINOCULARS

The PCF series of binoculars offer durable aluminum diecast bodies with a full rubber armoring, high-performance optics with BaK4 glass prisms, fully-multi-coated optical elements, and aspherical eyepiece elements for superior image quality. The internal focus design, and helicoid eyepieces make the PCF series durable and comfortable. For use on or around water, they have a JIS Class 6 waterproof rating, which means they can also be used in any weather condition.

## 12x50 PCF WP II

- Available in 8x40, 10x50, 12x50, 20x60.
- Waterproof and fogproof, JIS Class 6 (1m depth of water), nitrogen-filled.
- Fully multi-coated lenses and BaK4 prisms for increased light transmission.
- Mechanical focus lock feature allows user to lock in at a specific distance for convenient focus-free viewing.
- Ruggedly constructed with rubber-armoring to protect the optical and mechanical systems.
- Helicoid eyepieces for comfortable eye relief.
- Protected by a Worry-Free Warranty.

# XCF BINOCULARS

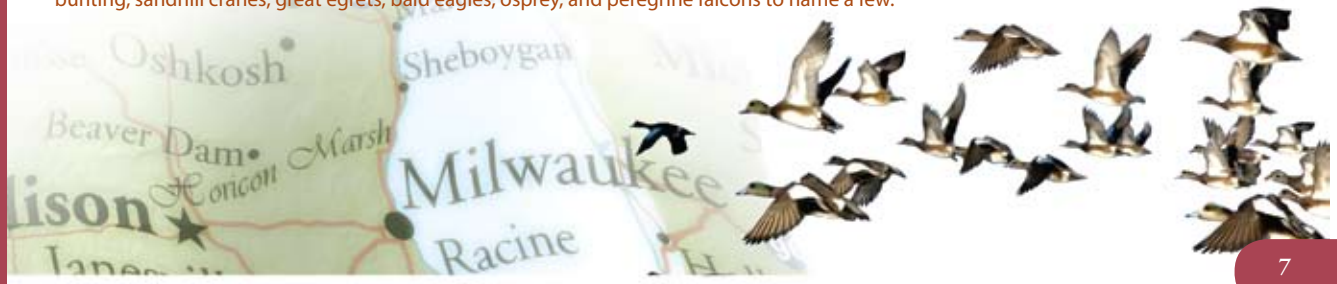
PENTAX XCF binoculars offer many of the features of more expensive binoculars at an exceptional value. They feature fully-multi-coated optical elements and BaK4 glass prisms which deliver exceptional image quality. The rubber armoring adds to the durability of XCF series of binoculars.

## 8x40 XCF

- Available in 8x40, 10x50, 12x50, 16x50 models.
- Multi-coated lenses provide optimal resolution.
- Center focusing to instantly bring images into focus.
- Rubber-armored to protect the optics and mechanical systems.
- Ergonomic design for easy handling.
- Protected by a Worry-Free Warranty.

Horicon

The Horicon wetland is the most extensive cattail marsh in the United States. It is also a water fowl viewing Mecca. It is easily accessible from Chicago and Milwaukee. Horicon's ornithology of birds, in addition to water fowl, includes snow bunting, sandhill cranes, great egrets, bald eagles, osprey, and peregrine falcons to name a few.



# UCF BINOCULARS

The PENTAX developed dual axis, unibody design of the UCF series of binoculars gives you compact portability in a durable design. They are ideal for travel or any time you need a clear view without the bulk of a full sized binocular. The unique design of the UCF series prevents misalignment of the barrels, plus aspherical lens elements add to the sharpness of the binoculars. All PENTAX binoculars are covered by our Worry-Free Warranty.

# UCF WP SERIES

### 8x25 UCF WP

- Available in 8x25 and 10x25.
- Fully waterproof and fogproof, submersible to 1 meter, JIS Class 6.
- Inner-focus optical design.
- High-refraction BaK4 glass prisms for a brighter, clearer image.
- Pop-out diopter adjustment knob.

# UCF R SERIES

### 8x21 UCF R

# UCF X II SERIES

### 8x25 UCF X II

- Available in 8x25, 10x25, 12x25, 16x25 models.
- Central fingertip control locks in diopter adjustment.
- Extra short minimum focusing distance of 6.2 feet.
- Fast and easy center focusing for handling ease.
- Slide-style eyepiece rings for extra viewing comfort.
- High quality BaK4 prisms transmit more light at the edges to enhance illumination for easier viewing in dim light.

Amazon

The clear but tannic stained waters of the Rio Negro are home to the powerful Peacock bass, Piranha and to the shy river dolphin. The adjacent jungles offer as many as 500 bird species per square mile plus monkeys, lizards and thousands of plant and tree species.

- Choice of 8x21 or 10x21 magnification.
- Ultra compact body…contemporary design.
- Fast and easy center focusing for handling ease.
- Revolutionary dual-axis, single body housing with synchronized eyepiece distance adjustment for correct optical alignment and comfortable viewing.
- Aspheric lenses.

# UCF ZOOM II SERIES

## 8-16x21 UCF ZOOM II

- Magnification power ranges from 8-16x21.
- Aspheric lens elements enhance edge-to-edge sharpness.
- In-line control system positions zooming, focusing and diopter adjustment together.
- High-refraction BaK4 glass prisms for brighter, clearer image.
- Pop-out right diopter adjustment knob.

# JUPITER SERIES

Weighing only 4.6 ounces, these feather-light binoculars are ideal for casual use. High-quality BaK4 prisms and fully coated optics for superio quality and minimal glare. Rubber eyepiece r viewing comfort, and a compact, ergonom design that fits neatly into a pocket or purse.

## 8x21 JUPITER III

- 8x21 magnification.
- Lightweight and compact construction.
- Easy to use center focusing.

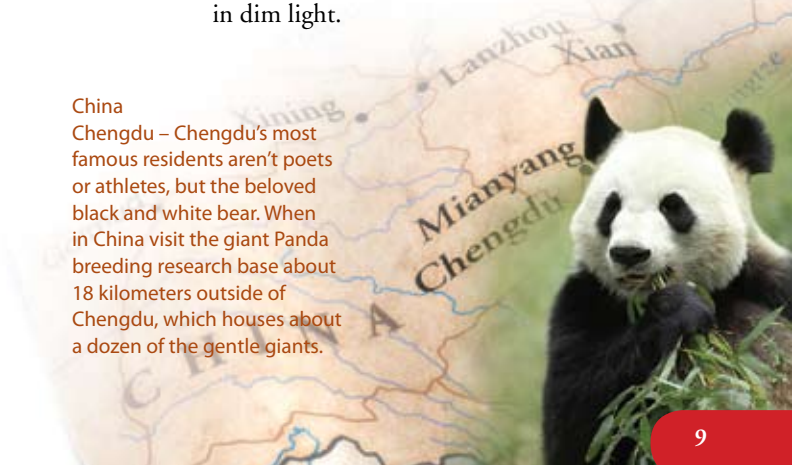
# PAPILIO SERIES

The PENTAX Papilio binoculars (Papilio being Latin for butterfly), offer aspherical lens elements, fully-multi-coated optics, and BaK4 glass prisms housed in a durable compact body. They also offer a totally unique close focusing feature, down to 1.6 feet, that make them ideal for butterfly and insect watching, as well as the observation of birds.

## 8.5x21 PAPILIO

- Ideally suited for viewing insects, birds, artwork or any other object at close range, down to 1.6 feet.
- Tough rubber covered exterior provides a sure grip and protects the internal mechanisms.
- Helicoid eyepiece rings for extra viewing comfort.
- Fully multi-coated optics to eliminate harmful ultraviolet rays while improving light transmission for high contrast images with no glare or flare.
- High quality BaK4 prisms transmit more light at the edges to enhance illumination for easier viewing in dim light.

China
Chengdu – Chengdu's most famous residents aren't poets or athletes, but the beloved black and white bear. When in China visit the giant Panda breeding research base about 18 kilometers outside of Chengdu, which houses about a dozen of the gentle giants.



# SPOTTING SCOPES

PENTAX offers a selection of high-performance spotting scopes to accommodate all viewing applications in the field. The ED line of spotting scopes come in a variety of sizes, from the compact PF-65ED II to the extremely bright PF-100ED, while the PF-63Zoom scope offers a lightweight, more affordable option. Each ED scope features extra-low dispersion (ED) glass to ensure images with more contrast and truer colors, rotating tripod collars and built-in sunshades. The entire line of spotting scopes also include smc lens coatings and are completely waterproof and rubber armored giving a reliable tool for the field. All scopes are covered by a PENTAX Worry-Free Warranty.

## PF-63ZOOM

- Bright, 63mm objective in a compact, lightweight body.
- 20x-50x zoom eyepiece is ideal for all viewing conditions from close in subjects to long distance glassing.
- Fully-multi-coated optics provide the maximum light transmission with little glare.
- Unique design for improved ergonomics and ease of use.
- Waterproof and nitrogen-filled to handle the most extreme weather conditions.
- Large focusing knob fits the palm of your hand for easy adjustment.
- Full rubber housing protects the binoculars from shock and makes them easier to hold.

SPOTTING SCOPES

## PF-65ED-A II

- Utilizing PENTAX telescope eyepieces, renowned for sharpness, field of view, contrast, and freedom. from aberration in a choice of fixed or zoom powers.
- Extra Low Dispersion (ED) optics incorporating Lanthanum Crown (rare earth) glass elements for optimum optical resolution.
- Larger objective lenses for bright viewing under all light conditions.
- Accepts all standard 1 ¼ inch interchangeable telescope eyepieces and accessories.
- JIS Class 6 waterproof, fogproof and nitrogen-filled
- Super-multi-coating maximizes light transmission, clarity and contrast.

## PF-100ED

## PF-80ED

# CAMERA ADAPTERS

PENTAX offers two digiscoping options for adapting a digital camera to a spotting scope. For DSLR users, we offer the PF-CA35 adapter that allows any k-mount body to be attached to our spotting scopes. We also offer the UA-1 universal adapter that allows almost any compact digital camera to be attached to PENTAX scopes.

*PF-CA35*

*UA-1*

*Cameras sold separately*

# XO EYEPIECES

- High-performance eyepieces are perfect for high-magnification observation and photography of the planets.
- High-refraction, low-dispersion lanthanum glass elements to provide high-resolution images with minimal aberrations.
- PENTAX-original smc full-surface multi-layer lens coating to improve light transmission efficiency.
- JIS Class 4 weatherproof construction makes these eyepieces more durable and water resistant.

# XF EYEPIECES

- Designed for use with our 65mm scopes.
- High-refraction, low-dispersion lanthanum glass elements to provide high-resolution images with minimal aberrations.
- PENTAX-original smc full-surface multi-layer lens coating to improve light transmission efficiency.
- Advanced computer simulation design technology was used to drastically reduce internal reflections producing brighter, clearer images.
- JIS Class 4 weatherproof construction make these eyepieces more durable and water resistant.
- Worry-Free Warranty.

# XW EYEPIECES

- Improved 70 degree field of view for easier viewing.
- Fully multi-coated lenses increase light transmission and color quality.
- High-refraction, low-dispersion lanthanum glass elements deliver bright, high-resolution images with minimal aberrations and distortions.
- Advanced computer simulation design technology was used to drastically reduce internal reflections producing brighter, clearer images.
- JIS Class 4 weatherproof construction make these eyepieces weather resistant and more durable.
- Long eye-relief for viewing with or without glasses.
- Worry-Free Warranty.

# GUIDELINES FOR SELECTING THE IDEAL PENTAX BINOCULAR

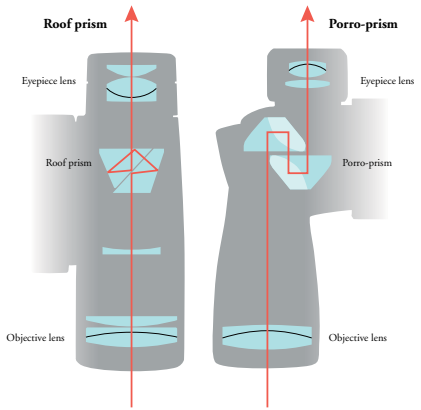
The following are several important guidelines to help you select the pair of binoculars that best suit your requirements.

## Roof Prism vs. Porro-Prism

Both roof and porro-prism optics are designed to turn the image upside down — from an inverted image to an erect image — by incorporating convex optical elements in their objective and eyepiece lenses. However, each design has some definite advantages.

Featuring a straight-line axis and high-precision optics, the roof prism design is better equipped for specialized applications. At the same magnification, it also allows for a more compact, streamlined body for enhanced maneuverability and portability.

On the other hand, the porro-prism design combines time-honored optics and solid viewing performance with a familiar, functional styling. It is customarily employed in popular, multi-purpose models.




## Magnification

The term "magnification" refers to the degree at which your subject appears larger through binoculars than with the naked eye. At eight-times magnification, for instance, a subject standing at 800 yards away appears as if it were standing at a distance of 100 yards. Objective lenses being the same, the greater the magnification, the less bright the image and the narrower the angle of view. Since high-magnification models also increase the risk of binocular shake, use of a tripod is recommended for these models. If your application involves occasional high-magnification viewing, a zoom model may be a good option.

## Image Brightness

When you hold your binoculars at one foot away from your eye, you will see a bright spot, or "exit pupil," in the middle of the eyepiece lens. The larger the diameter of the exit pupil, the brighter the image field. As a simple guide, a diameter of three millimeters assures comfortable daytime viewing, while that of five to seven millimeters is required for astronomical observation.

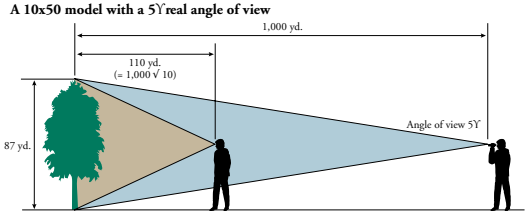
The exit pupil can be easily calculated by dividing the effective aperture of the objective lens by the magnification, while the relative brightness can be obtained by squaring the exit pupil. For the same magnification, binoculars with a larger exit pupil offer a brighter image field and are better equipped for observations under poor lighting conditions at dawn or dusk.

## Angle of View

Expressed in degrees, the term "angle of view" is a grade for the image field that can be seen without moving the binoculars. The greater the magnification, the narrower the angle of view. So binoculars with a greater angle of view are recommended for observation of fast-action sports and active subjects, while a pair with a greater magnification is better suited for observation of subjects at great distance.

If the subject is at a distance of 1,000 yards for instance, binoculars with a five-degree angle of view offer a circular image field of 87 yards in diameter.

**A 10x50 model with a 5Ÿreal angle of view**



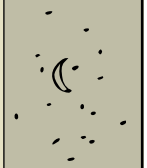
# GUIDELINES FOR SELECTING THE IDEAL PENTAX BINOCULAR

## The PENTAX "Worry Free" Warranty

PENTAX Sport Optic products are of the highest optical and mechanical quality. If your Pentax Binocular, Spotting Scope or Riflescope purchased in the USA from an authorized Pentax Sport Optics dealer requires repair, PENTAX will repair or replace it to the original purchaser (even if damaged by fault) for a charge of $19.95, to cover handling and return shipping.* This warranty does not cover cosmetic damage, theft or loss. Replacement may be with comparable model at PENTAX's discretion if the original model is no longer available.

*Applies only to unmodified equipment or product with modifications performed by authorized Pentax repair personnel.

## Which PENTAX Binocular is Best Suited for Your Application?

| | Outdoor/ Wildlife | Sports | Theater/ Concert | Travel/ Hiking | Marine Sports | Bird Watching |  Astronomy |
|---|---|---|---|---|---|---|---|
| DCF ED | ● | ● | | ● | ● | ● | ● |
| DCF SP | ● | ● | | | ● | ● | ● 1) |
| DCF WP II | ● | ● | | | ● | ● | ● |
| DCF HRc | ● | ● | | ● | ● | ● | ● |
| DCF HS | ● | ● | | | | ● | |
| DCF LV | ● | ● | ● | ● | | ● | ● |
| DCF SW | ● | ● | ● | ● | | ● | |
| PCF WP II | ● 3) | ● 3) | | | ● | ● 3) | |
| XCF | ● | ● | | ● | | ● | |
| UCF X II | ● | ● | | ● | | ● 2) | |
| UCF WP | ● | ● | | ● | ● | ● | |
| UCF R | | ● | ● | ● | | | |
| UCF ZOOM II | ● | ● | | ● | | ● | |
| PAPILIO | ● | ● | ● | ● | | ● | |
| JUPITER III | | ● | ● | ● | | | |

1) Excluding the 8x32 DCF SP 2) Excluding the 12x25 UCF XII and 16x25 UCF XII 3) Excluding the 12x50 PCF WP, 16x60 PCF WP and 20x60 PCF WP

# BINOCULAR SPECIFICATIONS

| Model | Type of Prism | Focus | Magnification | Obj. Lens Diameter (mm) | Exit Pupil (mm) | Relative Brightness | Eye Relief (mm) | Focus Range | Field of View (ft@1000 yd) | Height x Width (in) | Weight (oz) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8x32 DCF ED | roof | center | 8 | 32 | 4.0 | 16.0 | 17 | 4.9'-∞ | 393 | 5.0 x 5.0 | 23.5 |
| 8x43 DCF ED | roof | center | 8 | 43 | 5.4 | 29 | 22 | 6.6'-∞ | 330 | 5.7 x 5.0 | 25.2 |
| 10x42 DCF ED | roof | center | 10 | 42 | 4.3 | 18.5 | 17 | 11.5'-∞ | 315 | 5.7 x 5.0 | 25.8 |
| 10x50 DCF ED | roof | center | 10 | 50 | 5.0 | 25.0 | 22 | 11.5'-∞ | 261 | 6.7 x 5.2 | 30.2 |
| 8x32 DCF SP | roof | center | 8 | 32 | 4.0 | 16.0 | 17 | 4.9'-∞ | 393 | 5.0 x 5.0 | 23.2 |
| 8x43 DCF SP | roof | center | 8 | 43 | 5.4 | 29.0 | 22 | 6.6'-∞ | 330 | 5.7 x 5.0 | 24.5 |
| 10x43 DCF SP | roof | center | 10 | 43 | 4.3 | 18.5 | 17 | 6.6'-∞ | 315 | 5.7 x 5.0 | 25.0 |
| 10x50 DCF SP | roof | center | 10 | 50 | 5.0 | 25.0 | 22 | 11.5'-∞ | 261 | 6.7 x 5.2 | 29.6 |
| 12.5x50 DCF SP | roof | center | 12.5 | 50 | 4.0 | 16.0 | 17 | 11.5'–∞ | 252 | 6.7 x 5.2 | 30.2 |
| 8x42 DCF WP II | roof | center | 8 | 42 | 5.2 | 27.6 | 22 | 8.2'–∞ | 330 | 5.7 x 5.0 | 28.2 |
| 10x42 DCF WP II | roof | center | 10 | 42 | 4.2 | 17.6 | 17 | 8.2'–∞ | 315 | 5.7 x 5.0 | 28.2 |
| 8x42 DCF HRc | roof | center | 8 | 42 | 5.2 | 27.6 | 21 | 8.2'–∞ | 393 | 5.8x5.2 | 23.6 |
| 10x42 DCF HRc | roof | center | 10 | 42 | 4.2 | 17.6 | 18 | 8.2'–∞ | 315 | 5.7x 5.2 | 23.3 |
| 8x36 DCF HS | roof | center | 8 | 36 | 4.5 | 20.3 | 16 | 9.8'–∞ | 342 | 6.1 x 5.1 | 23.2 |
| 10x36 DCF HS | roof | center | 10 | 36 | 3.6 | 13 | 17.5 | 9.8'–∞ | 288 | 6.1 x 5.1 | 23.2 |
| 9x28 DCF LV | roof | center | 9 | 28 | 3.1 | 9.6 | 18 | 9.9'–∞ | 294 | 4.6 x 4.5 | 12.9 |
| 8x25 DCF SW | roof | center | 8 | 25 | 3.1 | 9.6 | 21 | 9.8'–∞ | 288 | 4.3x 4.1 | 10.6 |
| 10x25 DCF SW | roof | center | 10 | 25 | 2.5 | 6.3 | 20 | 9.8'–∞ | 261 | 4.3x 4.1 | 10.6 |
| 8x40 PCF WP II | porro | center | 8 | 40 | 5.0 | 25.0 | 20 | 11.5'-∞ | 330 | 5.5 x 7.0 | 28.2 |
| 10x50 PCF WP II | porro | center | 10 | 50 | 5.0 | 25.0 | 20 | 18.2'-∞ | 261 | 7.0 x 7.2 | 34.2 |
| 12x50 PCF WP II | porro | center | 12 | 50 | 4.2 | 17.4 | 20 | 18.2'-∞ | 219 | 7.0 x 7.2 | 34.6 |
| 20x60 PCF WP II | porro | center | 20 | 60 | 3.0 | 9.0 | 21 | 26.4'-∞ | 114 | 8.8 x 7.7 | 45.1 |
| 8x40 XCF | porro | center | 8 | 40 | 5.0 | 25 | 13 | 20'-∞ | 429 | 5.1 x 7.4 | 27.2 |
| 10x50 XCF | porro | center | 10 | 50 | 5.0 | 25 | 13 | 30'-∞ | 342 | 6.5 x 7.8 | 30.7 |
| 12x50 XCF | porro | center | 12 | 50 | 4.2 | 17.6 | 11 | 30'-∞ | 294 | 6.5 x 7.8 | 30.7 |
| 16x50 XCF | porro | center | 16 | 50 | 3.1 | 9.6 | 13 | 34'-∞ | 183 | 6.5 x 7.8 | 31.7 |

# BINOCULAR SPECIFICATIONS

| Model | Type of Prism | Focus | Magnification | Obj. Lens Diameter (mm) | Exit Pupil (mm) | Relative Brightness | Eye Relief (mm) | Focus Range | Field of View (ft@1000 yd) | Height x Width (in) | Weight (oz) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8x25 UCF X II | porro | center | 8 | 25 | 3.1 | 9.6 | 15 | 6.2'-∞ | 324 | 4.5 x 4.3 | 10.6 |
| 10x25 UCF X II | porro | center | 10 | 25 | 2.5 | 6.3 | 15 | 6.2'-∞ | 261 | 4.5 x 4.3 | 10.6 |
| 12x25 UCF X II | porro | center | 12 | 25 | 2.1 | 4.4 | 15 | 6.2'-∞ | 219 | 4.7 x 4.3 | 10.8 |
| 16x25 UCF X II | porro | center | 16 | 25 | 1.6 | 2.6 | 15 | 6.2'-∞ | 162 | 4.7 x 4.3 | 10.9 |
| 8x25 UCF WP | porro | center | 8 | 25 | 3.1 | 9.6 | 15 | 6.2'-∞ | 324 | 4.3 x 4.6 | 12.3 |
| 10x25 UCF WP | porro | center | 10 | 25 | 2.5 | 6.3 | 15 | 6.2'-∞ | 261 | 4.4 x 4.6 | 12.3 |
| 8x21 UCF R | porro | center | 8 | 21 | 2.6 | 6.7 | 13 | 9.2'-∞ | 324 | 3.2 x 4.3 | 7.1 |
| 10x21 UCF R | porro | center | 10 | 21 | 2.1 | 4.4 | 9.5 | 9.2'-∞ | 261 | 3.1 x 4.3 | 7.1 |
| 8–16x21 UCF ZOOM II | porro | center | 8–16 | 21 | 2.6-1.3 | 6.7-1.7 | 11 (16X) | 9.8'-∞ | 261-156 | 4.4 x 4.4 | 10.9 |
| 6.5x21 PAPILO | porro | center | 6.5 | 21 | 3.2 | 10.2 | 15 | 1.6'-∞ | 393 | 4.5 x 4.3 | 10.2 |
| 8.5x21 PAPILIO | porro | center | 8.5 | 21 | 2.5 | 6.3 | 15 | 1.6'-∞ | 315 | 4.6 x 4.3 | 10.2 |
| 8x21 JUPITER III | porro | center | 8 | 21 | 2.63 | 6.9 | 10 | 15'-∞ | 369 | 3.0 x 4.2 | 4.6 |

| PF-CA 35 CAMERA ADAPTER | | | |
|---|---|---|---|
| **Focal Length:** | | **Minimum Focusing Distance:** | |
| With PF-80ED: | 1,000mm | With PF-80ED: | Approx. 21.0 ft. (6.5m) |
| With PF-80ED-A: | 1,000mm | With PF-80ED-A: | Approx. 21.0 ft. (6.5m) |
| With PF-100ED: | 1,250mm | With PF-100ED: | Approx. 30.2 ft. (9.2m) |
| **Effective Aperture:** | F12.5 | **Dimensions (L x ø):** | 5.9 x 2.3 in. (149 x 59 mm) |
| | | **Weight:** | 8.8 oz. (250g) |

# SPOTTING SCOPE SPECIFICATIONS

PENTAX Imaging Company
600 12th Street #300
Golden, Colorado 80401

PENTAX Service Department
12000 Zuni Street, Suite 100B
Westminster, CO 80234
1-800-877-0155
**www.pentaxsportoptics.com**

| Model: | PF-80ED/80ED-A | PF-100ED | PF-65ED II/65ED-A II | PF-63Zoom |
|---|---|---|---|---|
| Objective Lens: | 80mm | 100mm | 65mm | 63mm |
| Eyepiece Ring: | Collet type | Collet type | Collet type | Fixed 20x-50x |
| Focus Range: | 19.0 ft. (5.8m) ~∞ | 28.0 ft. (8.5m) ~∞ | 16.4 ft. (5m) ~∞ | 39.4 ft. (12m)~ ∞ |
| Dimensions | 397x120x98mm/415x135x100mm | 510x134x117mm | 270x115x85mm/270x120x85mm | 98x100x328mm |
| | 15.6x4.7x3.9 in./16.3x5.3x3.9 in. | 20.0x5.3x4.6 in. | 10.6x4.5x3.3 in./10.6x4.7x3.3 in. | 3.8x3.9x12.9 in. |
| Weight: | 49.4 oz. (1,400g)/56.4 oz. (1,600g) | 92.0 oz. (2,600g) | 37 oz. (1,050g)/37.7oz. (1,070g) | 29.6 oz. (840g) |

| Eyepiece: | | XW7 | XW10 | XW14 | XW20 | Zoom Eyepiece 8-24mm | XF8.5 | XF12 | XFZoom Eyepiece 6.5-19.5mm |
|---|---|---|---|---|---|---|---|---|---|
| Magnification: | With PF-65ED II | 55.5x | 39x | 28x | 19.5x | 16x-48x | 46x | 32.5x | 20x-60x |
| | With PF-65ED-A II | 55.5x | 39x | 28x | 19.5x | 16x-48x | 46x | 32.5x | 20x-60x |
| | With PF-80ED: | 71x | 50x | 36x | 26x | 20~60x | 59x | 42x | 26x-78x |
| | With PF-80ED-A | 74x | 52x | 37x | 27x | 21~63x | 61x | 43x | 27x-81x |
| | With PF-100ED | 90x | 62x | 44x | 32x | 26~78x | 74x | 52x | 32.5x-97.5x |
| Angle of View: | With PF-65ED II | 1.25 | 1.8 | 2.5 | 3.5 | 2.4-1.25 | 1.3 | 1.85 | 2.1-1 |
| | With PF-65ED-A II | 1.25 | 1.8 | 2.5 | 3.5 | 2.4-1.25 | 1.3 | 1.85 | 2.1-1 |
| | With PF-80ED | 1.0 | 1.4 | 2.0 | 2.7 | 1.9~1.0 | 1.0 | 1.5 | 1.6-0.8 |
| | With PF-80ED-A | 0.95 | 1.4 | 1.9 | 2.6 | 1.8~0.95 | 0.95 | 1.4 | 1.8-0.95 |
| | With PF-100ED: | 0.8 | 1.1 | 1.6 | 2.2 | 1.5~0.8 | 0.8 | 1.2 | 1.3-0.65 |
| Field of View: | With PF-65ED II | | | | | | | | |
| | At 1,000m: | 21m | 31m | 44m | 61m | 40-21m | 22m | 32m | 37-17m |
| | At 1,000 yd. | 63 ft. | 93 ft. | 132 ft. | 183 ft. | 120-63 ft. | 66 ft. | 96 ft. | 117-51ft |
| | With PF-65ED-A II | | | | | | | | |
| | At 1,000m | 21m | 31m | 44m | 61m | 40-21m | 22m | 32m | 37-17m |
| | At 1,000 yd. | 63 ft. | 93 ft. | 132 ft. | 183 ft. | 120-63 ft. | 66 ft. | 96 ft. | 117-51 ft. |
| | With PF-80ED: | | | | | | | | |
| | At 1,000m: | 17m | 24m | 35m | 47m | 33~17m | 17m | 26m | 28-14m |
| | At 1,000 yd.: | 51 ft. | 72 ft. | 105 ft. | 141 ft. | 99~51 ft. | 51 ft. | 78 ft. | 84-42 ft. |
| | With PF-80ED-A: | | | | | | | | |
| | At 1,000m | 16.5m | 24m | 33m | 45m | 31~16.5m | 16.5m | 24m | 31-16.5m |
| | At 1,000 yd. | 49.5 ft. | 72 ft. | 99 ft. | 135 ft. | 93~49.5 ft. | 49.5 ft. | 72 ft. | 93-49.5 ft. |
| | With PF-100ED | | | | | | | | |
| | At 1,000m | 14m | 19m | 28m | 38m | 26~14m | 14m | 21m | 22.5-11m |
| | At 1,000 yd. | 42 ft. | 57 ft. | 84 ft. | 114 ft. | 78~42 ft. | 42 ft. | 63 ft. | 67.5-33 ft. |
| Exit Pupil: | With PF-65ED II | 1.2mm | 1.7mm | 2.4mm | 3.3mm | 4-1.4mm | 1.4mm | 2.0mm | 2.2-1.1mm |
| | With PF-65ED-A II | 1.2mm | 1.7mm | 2.4mm | 3.3mm | 4-1.4mm | 1.4mm | 2.0mm | 3.2-1.1mm |
| | With PF-80ED | 1.1mm | 1.6mm | 2.2mm | 3.1mm | 4.0~1.3mm | 1.4mm | 1.9mm | 3.0-1.0mm |
| | With PF-80ED-A | 1.1mm | 1.6mm | 2.2mm | 3.0mm | 3.8~1.3mm | 1.3mm | 1.8mm | 3.0-1.0mm |
| | With PF-100ED | 1.1mm | 1.6mm | 2.3mm | 3.1mm | 3.9~1.3mm | 1.4mm | 1.9mm | 3.0-1.0mm |
| Eye Relief: | | 20mm | 20mm | 20mm | 20mm | 18~22mm | 18mm | 18mm | 11-15mm |
| Relative Brightness: | | | | | | | | | |
| | With PF-65ED II | 1.4 | 2.9 | 5.7 | 10.9 | 16-2.0 | 1.9 | 4.0 | 10.2-1.2 |
| | With PF-65ED-A II | 1.4 | 2.9 | 5.7 | 10.9 | 16-2.0 | 1.9 | 4.0 | 10.2-1.2 |
| | With PF-80ED | 1.2 | 2.6 | 4.8 | 9.6 | 16~1.7 | 1.9 | 3.1 | 9.0-1.0 |
| | With PF-80ED-A | 1.2 | 2.6 | 4.8 | 9.0 | 14.4~1.7 | 1.6 | 3.2 | 9.0-1.0 |
| | With PF-100ED | 1.2 | 2.6 | 5.3 | 9.6 | 15.2~1.7 | 1.9 | 3.1 | 9.0-1.0 |
| Dimensions (L x ø): | | 120 x 61 mm | 110 x 61 mm | 97 x 61 mm | 86 x 61 mm | 144 x 69 mm | 83x43mm | 78x43mm | 90x50mm |
| | | 4.7 x 2.4 in. | 4.3 x 2.4 in. | 3.8 x 2.4 in. | 3.4 x 2.4 in. | 5.7 x 2.7 in. | 3.3x1.7 in. | 3.1x1.7 in. | 3.5x2.0 in. |
| Weight: | | 13.8 oz. (390g) | 13.8 oz. (390g) | 12.9 oz. (365g) | 12.5 oz. (355g) | 19.4 oz. (550g) | 5.3 oz. (150g) | 5.5 oz. (155g) | 8.5 oz. (240g) |